

SEMICONDUCTOR DEVICE

ABSTRACT OF THE DISCLOSURE

5       A semiconductor device having a photo diode which  
has substantially the same sensitivity to a plurality of  
light having different wavelengths, comprising a first  
conductivity type semiconductor layer and a second  
conductivity type semiconductor layer formed at a surface  
10      layer portion of said first conductivity type  
semiconductor layer, wherein the sensitivity to light of  
a first wavelength and the sensitivity to light of a  
second wavelength which is different from said first  
wavelength are made substantially the same by designing a  
15      region in which a depletion layer spreads from a junction  
of said first conductivity type semiconductor layer and  
said second conductivity type semiconductor layer when an  
inverse bias is applied to said first conductivity type  
semiconductor layer and said second conductivity type  
20      semiconductor layer, for example, by designing it to  
spread in a region of 3 to 6  $\mu\text{m}$  or a region of 2 to 7  $\mu\text{m}$   
from the surface of the second conductivity type  
semiconductor layer in the depth direction.

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